

Work Order ID 96385

\*96385\*

Page 1

Monday, January 28, 2013 9:01:13 AM

Item ID: D3628-5 Accept \*N900040100\* Setup Start \*NS1\*  
 Revision ID: Stop \*NS2\*  
 Item Name: Cupped Washer  
 Start Date: 1/28/2013 Start Qty: 1,200.00 \*1200\* Cust Item ID:  
 Required Date: 2/11/2013 Req'd Qty: 1,200.00 \*1200\* Customer:

Reference:

Approvals: Process Plan: PL Date: 13-01-28 Tooling: \_\_\_\_\_ Date: \_\_\_\_\_  
 QC: \_\_\_\_\_ Date: \_\_\_\_\_ SPC (Y/N): \_\_\_\_\_ Date: \_\_\_\_\_  
 Run Start \*NR1\*  
 Stop \*NR2\*

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
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Draw Nbr	Revision Nbr
D3628	(C)

100	PURCHASING	0.00							
*100*									
Purchasing	Memo	0.00							
Purchasing	Issue P/O: <u>18965</u>								
	Manufacture as per dwg D3628								
	Possible Supplier: GFI								
	Material release note is required								
110	Receive & Inspect for Damage & Mat'l Certs	0.00							
*110*									
Packaging	Memo	0.00							
Packaging	Ensure material certification is attached								

PL 13-01-28

13/4/22 (1200)

NCR: Yes / No

## WORK ORDER NON-CONFORMANCE / UPDATE

DQA: \_\_\_\_\_ Date: \_\_\_\_\_

QA Closed: \_\_\_\_\_ Date: \_\_\_\_\_

Work Order: _____  Part No. _____  NCR No. _____	<b>DISPOSITION</b>  <div style="display: flex; justify-content: space-around;"> <div>             Rework <input type="checkbox"/>              Scrap <input type="checkbox"/>              Use-as-is <input type="checkbox"/>              Work Order Update <input type="checkbox"/> </div> <div>             Skid-tube <input type="checkbox"/>              Machining <input type="checkbox"/>              Thermoforming <input type="checkbox"/>              Large Fab <input type="checkbox"/> </div> <div>             Crosstube <input type="checkbox"/>              Small Fab <input type="checkbox"/>              Finishing <input type="checkbox"/>              Composite <input type="checkbox"/> </div> <div>             Water Jet <input type="checkbox"/>              Prod. Eng. Coord. <input type="checkbox"/>              Rec/Store/Packaging <input type="checkbox"/>              Supplier <input type="checkbox"/> </div> <div>             Engineering <input type="checkbox"/>              Quality <input type="checkbox"/>              Other <input type="checkbox"/> </div> </div>	<b>AGAINST DEPARTMENT/PROCESS</b>
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Root Cause	Date	Step	Qty	Description of work order update or Non-conformance	Initial Chief Eng	Action Description	Sign & Date	Verification	QC Inspector
Doc/Data									
Equip/Tooling									
Operator									
Material									
Setup									
Other									
Process									
Supplier									
Training									
Unapproved									

### FAULT CATEGORY

<b>Landing Gear</b> <input type="checkbox"/> Bending <input type="checkbox"/> Centre Not Concentric to O/S <input type="checkbox"/> Cracks <input type="checkbox"/> Crushed/Crimped <input type="checkbox"/> Cuffs <input type="checkbox"/> Heat Treat <input type="checkbox"/> Inspection Strip in Tube <input type="checkbox"/> Ripples in Bend <input type="checkbox"/> Torque Waves in Extrusion <input type="checkbox"/> Turning Sequence <input type="checkbox"/> Wave/Twist in Tube	<b>General</b> <input type="checkbox"/> Bend <input type="checkbox"/> BOM/Route <input type="checkbox"/> Broken/Damaged <input type="checkbox"/> Burrs <input type="checkbox"/> Contamination <input type="checkbox"/> Countersink <input type="checkbox"/> Cut Too Short <input type="checkbox"/> Drill Holes <input type="checkbox"/> Drawing <input type="checkbox"/> Finish <input type="checkbox"/> Folio	<input type="checkbox"/> Grain <input type="checkbox"/> Hardware <input type="checkbox"/> Inspection Incomplete <input type="checkbox"/> Instructions Incomplete/Unclear <input type="checkbox"/> Maintenance <input type="checkbox"/> Mislabeled <input type="checkbox"/> Misread <input type="checkbox"/> Offset <input type="checkbox"/> Out of Calibration <input type="checkbox"/> Out of Sequence <input type="checkbox"/> Outside Dimensions
<div style="display: flex; justify-content: space-between;"> <div style="width: 30%;"> <input type="checkbox"/> Ovalized  <input type="checkbox"/> Over/Under tolerance  <input type="checkbox"/> Part Incorrect  <input type="checkbox"/> Part Lost/Missing  <input type="checkbox"/> Part Moved  <input type="checkbox"/> Positioned Wrong  <input type="checkbox"/> Power Loss/Surge         </div> <div style="width: 30%;"> <input type="checkbox"/> Pressure/Forced  <input type="checkbox"/> Temperature/Cure  <input type="checkbox"/> Weld  <input type="checkbox"/> Wrong Stock Pulled         </div> <div style="width: 30%;"> <input type="checkbox"/> Other         </div> </div>		

# Work Order ID 96385

**\*96385\***

Page 2

Monday, January 28, 2013 9:01:13 AM

Item ID: D3628-5 Accept **\*N900040100\*** Setup Start **\*NS1\***  
Revision ID: Stop **\*NS2\***  
Item Name: Cupped Washer

Start Date: 1/28/2013 Start Qty: 1,200.00 **\*1200\*** Cust Item ID:  
Required Date: 2/11/2013 Req'd Qty: 1,200.00 **\*1200\*** Customer:

Reference:

Approvals: Process Plan: \_\_\_\_\_ Date: \_\_\_\_\_ Tooling: \_\_\_\_\_ Date: \_\_\_\_\_ Run Start **\*NR1\***  
QC: \_\_\_\_\_ Date: \_\_\_\_\_ SPC (Y/N): \_\_\_\_\_ Date: \_\_\_\_\_ Stop **\*NR2\***

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
120 <b>*120*</b> QC Quality Control	QC6- Inspect dimensions to drawing  Memo	0.00 0.00				1200			
130 <b>*130*</b> Packaging Packaging	Identify as per dwg & Stock Location: <u>Stock</u>  Memo	0.00 0.00				1200			SP 13-2-25
140 <b>*140*</b> QC Quality Control	QC21- Final Inspection - Work Order Release  Memo	0.00 0.00							13/2/25 ME 13-2-25

NCR: Yes / No

**WORK ORDER NON-CONFORMANCE / UPDATE**

DQA: \_\_\_\_\_ Date: \_\_\_\_\_

QA Closed: \_\_\_\_\_ Date: \_\_\_\_\_

Work Order: _____  Part No. _____  NCR No. _____	<b>DISPOSITION</b>  Rework <input type="checkbox"/> Scrap <input type="checkbox"/> Use-as-is <input type="checkbox"/> Work Order Update <input type="checkbox"/>	<b>AGAINST DEPARTMENT/PROCESS</b>  <table style="width: 100%;"> <tr> <td>Skid-tube <input type="checkbox"/></td> <td>Crosstube <input type="checkbox"/></td> <td>Water Jet <input type="checkbox"/></td> <td>Engineering <input type="checkbox"/></td> </tr> <tr> <td>Machining <input type="checkbox"/></td> <td>Small Fab <input type="checkbox"/></td> <td>Prod. Eng. Coord. <input type="checkbox"/></td> <td>Quality <input type="checkbox"/></td> </tr> <tr> <td>Thermoforming <input type="checkbox"/></td> <td>Finishing <input type="checkbox"/></td> <td>Rec/Store/Packaging <input type="checkbox"/></td> <td>Other <input type="checkbox"/></td> </tr> <tr> <td>Large Fab <input type="checkbox"/></td> <td>Composite <input type="checkbox"/></td> <td>Supplier <input type="checkbox"/></td> <td></td> </tr> </table>	Skid-tube <input type="checkbox"/>	Crosstube <input type="checkbox"/>	Water Jet <input type="checkbox"/>	Engineering <input type="checkbox"/>	Machining <input type="checkbox"/>	Small Fab <input type="checkbox"/>	Prod. Eng. Coord. <input type="checkbox"/>	Quality <input type="checkbox"/>	Thermoforming <input type="checkbox"/>	Finishing <input type="checkbox"/>	Rec/Store/Packaging <input type="checkbox"/>	Other <input type="checkbox"/>	Large Fab <input type="checkbox"/>	Composite <input type="checkbox"/>	Supplier <input type="checkbox"/>	
Skid-tube <input type="checkbox"/>	Crosstube <input type="checkbox"/>	Water Jet <input type="checkbox"/>	Engineering <input type="checkbox"/>															
Machining <input type="checkbox"/>	Small Fab <input type="checkbox"/>	Prod. Eng. Coord. <input type="checkbox"/>	Quality <input type="checkbox"/>															
Thermoforming <input type="checkbox"/>	Finishing <input type="checkbox"/>	Rec/Store/Packaging <input type="checkbox"/>	Other <input type="checkbox"/>															
Large Fab <input type="checkbox"/>	Composite <input type="checkbox"/>	Supplier <input type="checkbox"/>																

Root Cause	Date	Step	Qty	Description of work order update or Non-conformance	Initial Chief Eng	Action Description	Sign & Date	Verification	QC Inspector
Doc/Data									
Equip/Tooling									
Operator									
Material									
Setup									
Other									
Process									
Supplier									
Training									
Unapproved									

**FAULT CATEGORY**

<b>Landing Gear</b> <input type="checkbox"/> Bending <input type="checkbox"/> Centre Not Concentric to O/S <input type="checkbox"/> Cracks <input type="checkbox"/> Crushed/Crimped <input type="checkbox"/> Cuffs <input type="checkbox"/> Heat Treat <input type="checkbox"/> Inspection Strip in Tube <input type="checkbox"/> Ripples in Bend <input type="checkbox"/> Torque Waves in Extrusion <input type="checkbox"/> Turning Sequence <input type="checkbox"/> Wave/Twist in Tube	<b>General</b> <input type="checkbox"/> Bend <input type="checkbox"/> BOM/Route <input type="checkbox"/> Broken/Damaged <input type="checkbox"/> Burrs <input type="checkbox"/> Contamination <input type="checkbox"/> Countersink <input type="checkbox"/> Cut Too Short <input type="checkbox"/> Drill Holes <input type="checkbox"/> Drawing <input type="checkbox"/> Finish <input type="checkbox"/> Folio	<input type="checkbox"/> Grain <input type="checkbox"/> Hardware <input type="checkbox"/> Inspection Incomplete <input type="checkbox"/> Instructions Incomplete/Unclear <input type="checkbox"/> Maintenance <input type="checkbox"/> Mislabeled <input type="checkbox"/> Misread <input type="checkbox"/> Offset <input type="checkbox"/> Out of Calibration <input type="checkbox"/> Out of Sequence <input type="checkbox"/> Outside Dimensions
		<input type="checkbox"/> Ovalized <input type="checkbox"/> Over/Under tolerance <input type="checkbox"/> Part Incorrect <input type="checkbox"/> Part Lost/Missing <input type="checkbox"/> Part Moved <input type="checkbox"/> Positioned Wrong <input type="checkbox"/> Power Loss/Surge
		<input type="checkbox"/> Pressure/Forced <input type="checkbox"/> Temperature/Cure <input type="checkbox"/> Weld <input type="checkbox"/> Wrong Stock Pulled <input type="checkbox"/> Other

# Picklist Print

Monday, January 28, 2013 9:01:18 AM

Page 1

Work Order ID: 96385

**\*96385\***

Parent Item: D3628-5

**\*D3628-5\***

Parent Item Name: Cupped Washer

Start Date: 1/28/2013

Required Date: 2/11/2013

Start Qty: 1,200.00

Required Qty: 1,200.00

Comments: IPP REV:A 12.04.24 NEW ISSUE DD VERF:EC

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Qty per Kit	Total Qty	Qty Issued	Date Issued	Status
D3628-5P		Purchased	No			110	Each	0.0000	1	1200			

**\*D3628-5P\***

CUPPED WASHER

\*\*

10/3/22 (1200)

NCR: Yes / No

## WORK ORDER NON-CONFORMANCE / UPDATE

DQA: \_\_\_\_\_ Date: \_\_\_\_\_

QA Closed: \_\_\_\_\_ Date: \_\_\_\_\_

Work Order: _____  Part No. _____  NCR No. _____	<b>DISPOSITION</b>  <div style="display: flex; justify-content: space-around;"> <div>             Rework <input type="checkbox"/>              Scrap <input type="checkbox"/>              Use-as-is <input type="checkbox"/>              Work Order Update <input type="checkbox"/> </div> <div>             Skid-tube <input type="checkbox"/>              Machining <input type="checkbox"/>              Thermoforming <input type="checkbox"/>              Large Fab <input type="checkbox"/> </div> <div>             Crosstube <input type="checkbox"/>              Small Fab <input type="checkbox"/>              Finishing <input type="checkbox"/>              Composite <input type="checkbox"/> </div> <div>             Water Jet <input type="checkbox"/>              Prod. Eng. Coord. <input type="checkbox"/>              Rec/Store/Packaging <input type="checkbox"/>              Supplier <input type="checkbox"/> </div> <div>             Engineering <input type="checkbox"/>              Quality <input type="checkbox"/>              Other <input type="checkbox"/> </div> </div>
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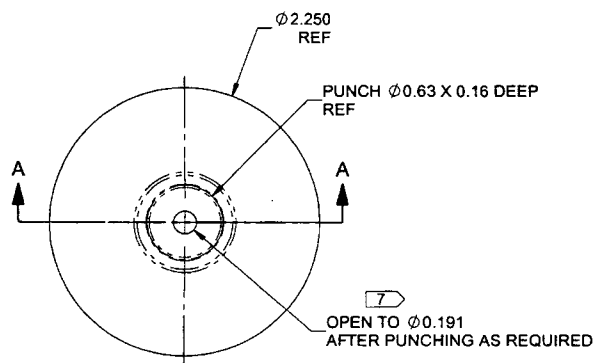
Root Cause	Date	Step	Qty	Description of work order update or Non-conformance	Initial Chief Eng	Action Description	Sign & Date	Verification	QC Inspector
Doc/Data									
Equip/Tooling									
Operator									
Material									
Setup									
Other									
Process									
Supplier									
Training									
Unapproved									

### FAULT CATEGORY

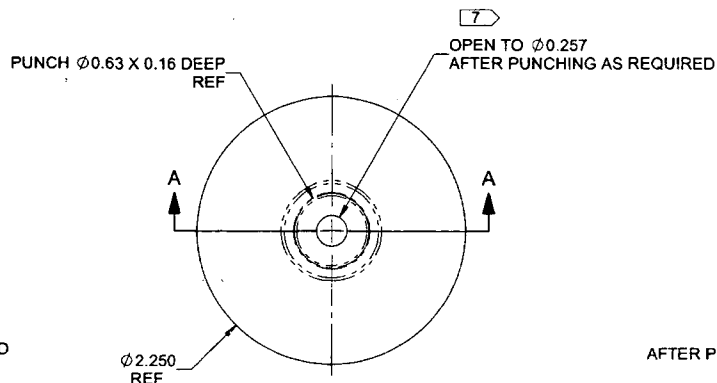
<b>Landing Gear</b> <input type="checkbox"/> Bending <input type="checkbox"/> Centre Not Concentric to O/S <input type="checkbox"/> Cracks <input type="checkbox"/> Crushed/Crimped <input type="checkbox"/> Cuffs <input type="checkbox"/> Heat Treat <input type="checkbox"/> Inspection Strip in Tube <input type="checkbox"/> Ripples in Bend <input type="checkbox"/> Torque Waves in Extrusion <input type="checkbox"/> Turning Sequence <input type="checkbox"/> Wave/Twist in Tube	<b>General</b> <input type="checkbox"/> Bend <input type="checkbox"/> BOM/Route <input type="checkbox"/> Broken/Damaged <input type="checkbox"/> Burrs <input type="checkbox"/> Contamination <input type="checkbox"/> Countersink <input type="checkbox"/> Cut Too Short <input type="checkbox"/> Drill Holes <input type="checkbox"/> Drawing <input type="checkbox"/> Finish <input type="checkbox"/> Folio	<input type="checkbox"/> Grain <input type="checkbox"/> Hardware <input type="checkbox"/> Inspection Incomplete <input type="checkbox"/> Instructions Incomplete/Unclear <input type="checkbox"/> Maintenance <input type="checkbox"/> Mislabeled <input type="checkbox"/> Misread <input type="checkbox"/> Offset <input type="checkbox"/> Out of Calibration <input type="checkbox"/> Out of Sequence <input type="checkbox"/> Outside Dimensions
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☐ Ovalized  
☐ Over/Under tolerance  
☐ Part Incorrect  
☐ Part Lost/Missing  
☐ Part Moved  
☐ Positioned Wrong  
☐ Power Loss/Surge

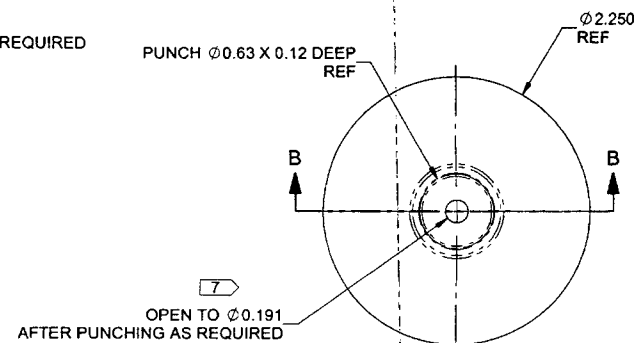
☐ Pressure/Forced  
☐ Temperature/Cure  
☐ Weld  
☐ Wrong Stock Pulled  
☐ Other



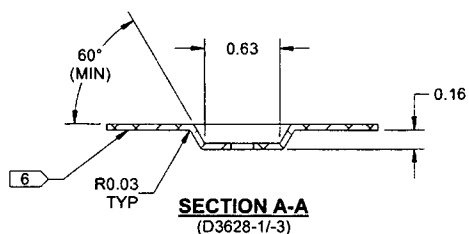
**D3628-1 CUPPED WASHER**



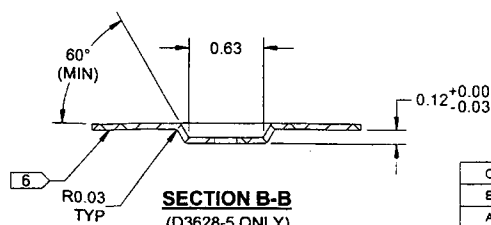
**D3628-3 CUPPED WASHER**



**D3628-5 CUPPED WASHER**



**SECTION A-A**  
(D3628-1/-3)



**SECTION B-B**  
(D3628-5 ONLY)

- NOTES:**
- 1) MATERIAL: MADE FROM D3628-1F
  - 2) FINISH: NONE
  - 3) TOLERANCES ARE PER DART QSI 018 UNLESS OTHERWISE NOTED
  - 4) ALL DIMENSIONS ARE IN INCHES UNLESS OTHERWISE NOTED
  - 5) BREAK ALL SHARP EDGES 0.005 TO 0.010 MAX
  - 6) IDENTIFICATION: IDENTIFY PER QSI 044 6.5
  - 7) WHEN DRILLING OUT THE CENTRE HOLE AFTER PUNCHING, ENSURE THAT THE HOLE IS DRILLED CONCENTRIC TO THE CUPPED AREA; WITHIN 0.03"
  - 8) WEIGHT: 0.02 lbs

C	UPDATE DWG TO CURRENT STD; ADD -5, ZN C1-1.	DC	12.04.19
B	REMOVE POWDER COAT	CB	07.07.09
A	NEW ISSUE	CB	07.06.08
REV.	DESCRIPTION	BY	DATE
DESIGN	BC	<b>DART AEROSPACE LTD</b> HAWKESBURY, ONTARIO, CANADA	
DRAWN	BC		
CHECKED	BE	DRAWING NO.	REV. C
MFG. APPR.	EE	D3628	SHEET 1 OF 2
APPROVED	10	TITLE	SCALE
DE APPR.	11	CUPPED WASHER	NTS
DATE	12.04.19	COPYRIGHT © 2007 BY DART AEROSPACE LTD THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL AND IS SUPPLIED ON THE EXPRESS CONDITION THAT IT IS NOT TO BE USED FOR ANY PURPOSE OR COPIED OR COMMUNICATED TO ANY OTHER PERSON WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE LTD.	

RELEASE  
R 2012-05-07

96385  
R130128

NCR: Yes / No

**WORK ORDER NON-CONFORMANCE / UPDATE**

DQA: \_\_\_\_\_ Date: \_\_\_\_\_

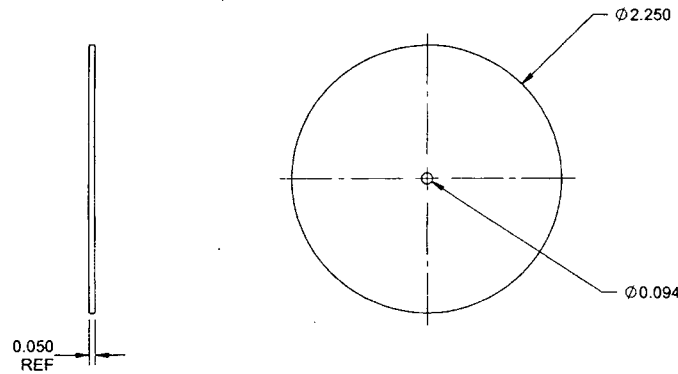
QA Closed: \_\_\_\_\_ Date: \_\_\_\_\_

Work Order: _____  Part No. _____  NCR No. _____				<b>DISPOSITION</b>  Rework <input type="checkbox"/> Scrap <input type="checkbox"/> Use-as-is <input type="checkbox"/> Work Order Update <input type="checkbox"/>		<b>AGAINST DEPARTMENT/PROCESS</b>  <table style="width: 100%; border: none;"> <tr> <td style="width: 33%;">Skid-tube <input type="checkbox"/></td> <td style="width: 33%;">Crosstube <input type="checkbox"/></td> <td style="width: 33%;">Water Jet <input type="checkbox"/></td> <td style="width: 33%;">Engineering <input type="checkbox"/></td> </tr> <tr> <td>Machining <input type="checkbox"/></td> <td>Small Fab <input type="checkbox"/></td> <td>Prod. Eng. Coord. <input type="checkbox"/></td> <td>Quality <input type="checkbox"/></td> </tr> <tr> <td>Thermoforming <input type="checkbox"/></td> <td>Finishing <input type="checkbox"/></td> <td>Rec/Store/Packaging <input type="checkbox"/></td> <td>Other <input type="checkbox"/></td> </tr> <tr> <td>Large Fab <input type="checkbox"/></td> <td>Composite <input type="checkbox"/></td> <td>Supplier <input type="checkbox"/></td> <td></td> </tr> </table>						Skid-tube <input type="checkbox"/>	Crosstube <input type="checkbox"/>	Water Jet <input type="checkbox"/>	Engineering <input type="checkbox"/>	Machining <input type="checkbox"/>	Small Fab <input type="checkbox"/>	Prod. Eng. Coord. <input type="checkbox"/>	Quality <input type="checkbox"/>	Thermoforming <input type="checkbox"/>	Finishing <input type="checkbox"/>	Rec/Store/Packaging <input type="checkbox"/>	Other <input type="checkbox"/>	Large Fab <input type="checkbox"/>	Composite <input type="checkbox"/>	Supplier <input type="checkbox"/>	
Skid-tube <input type="checkbox"/>	Crosstube <input type="checkbox"/>	Water Jet <input type="checkbox"/>	Engineering <input type="checkbox"/>																								
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Large Fab <input type="checkbox"/>	Composite <input type="checkbox"/>	Supplier <input type="checkbox"/>																									
<b>Root Cause</b>	<b>Date</b>	<b>Step</b>	<b>Qty</b>	<b>Description of work order update or Non-conformance</b>	<b>Initial Chief Eng</b>	<b>Action Description</b>	<b>Sign &amp; Date</b>	<b>Verification</b>	<b>QC Inspector</b>																		
Doc/Data <input type="checkbox"/>																											
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Process <input type="checkbox"/>																											
Supplier <input type="checkbox"/>																											
Training <input type="checkbox"/>																											
Unapproved <input type="checkbox"/>																											

FAULT CATEGORY												
<b>Landing Gear</b> <input type="checkbox"/> Bending <input type="checkbox"/> Centre Not Concentric to O/S <input type="checkbox"/> Cracks <input type="checkbox"/> Crushed/Crimped. <input type="checkbox"/> Cuffs <input type="checkbox"/> Heat Treat <input type="checkbox"/> Inspection Strip in Tube <input type="checkbox"/> Ripples in Bend <input type="checkbox"/> Torque Waves in Extrusion <input type="checkbox"/> Turning Sequence <input type="checkbox"/> Wave/Twist in Tube			<b>General</b> <input type="checkbox"/> Bend <input type="checkbox"/> BOM/Route <input type="checkbox"/> Broken/Damaged <input type="checkbox"/> Burrs <input type="checkbox"/> Contamination <input type="checkbox"/> Countersink <input type="checkbox"/> Cut Too Short <input type="checkbox"/> Drill Holes <input type="checkbox"/> Drawing <input type="checkbox"/> Finish <input type="checkbox"/> Folio			<input type="checkbox"/> Grain <input type="checkbox"/> Hardware <input type="checkbox"/> Inspection Incomplete <input type="checkbox"/> Instructions Incomplete/Unclear <input type="checkbox"/> Maintenance <input type="checkbox"/> Mislabeled <input type="checkbox"/> Misread <input type="checkbox"/> Offset <input type="checkbox"/> Out of Calibration <input type="checkbox"/> Out of Sequence <input type="checkbox"/> Outside Dimensions			<input type="checkbox"/> Ovalized <input type="checkbox"/> Over/Under tolerance <input type="checkbox"/> Part Incorrect <input type="checkbox"/> Part Lost/Missing <input type="checkbox"/> Part Moved <input type="checkbox"/> Positioned Wrong <input type="checkbox"/> Power Loss/Surge		<input type="checkbox"/> Pressure/Forced <input type="checkbox"/> Temperature/Cure <input type="checkbox"/> Weld <input type="checkbox"/> Wrong Stock Pulled  <input type="checkbox"/> Other	



96385



**D3628-1F FLAT PATTERN**

**RELEASED**  
2012-05-07

**NOTES:**

- 1) MATERIAL: AISI 304/316 STAINLESS STEEL SHEET, 18 GAUGE (0.050 THICK)  
ANNEALED, 2B FINISH  
PER MIL-S-5059 OR AMS 5513 (304) OR AMS 5524 (316) OR ASTM A240 OR ASME SA240  
REF DART SPEC M304S18GA
- 2) FINISH: NONE
- 3) TOLERANCES ARE PER DART QSI 018 UNLESS OTHERWISE NOTED
- 4) ALL DIMENSIONS ARE IN INCHES UNLESS OTHERWISE NOTED
- 5) BREAK ALL SHARP EDGES 0.005 TO 0.010 MAX
- 6) IDENTIFICATION: NONE
- 7) WEIGHT: 0.02 lbs

DESIGN	DC	<b>DART AEROSPACE LTD</b>	
DRAWN	DC	HAWKESBURY, ONTARIO, CANADA	
CHECKED	BE	DRAWING NO.	REV. C
MFG. APPR.	EE	D3628	SHEET 2 OF 2
APPROVED	NO	TITLE	SCALE
DE APPR.	HA	CUPPED WASHER	NTS
DATE	12.04.19	<small>COPYRIGHT © 2007 BY DART AEROSPACE LTD THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL AND IS SUPPLIED ON THE EXPRESS CONDITION THAT IT IS NOT TO BE USED FOR ANY PURPOSE OR COPIED OR COMMUNICATED TO ANY OTHER PERSON WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE LTD</small>	

NCR: Yes / No

## WORK ORDER NON-CONFORMANCE / UPDATE

DQA: \_\_\_\_\_ Date: \_\_\_\_\_

QA Closed: \_\_\_\_\_ Date: \_\_\_\_\_

Work Order: _____  Part No. _____  NCR No. _____	<b>DISPOSITION</b>  Rework <input type="checkbox"/> Scrap <input type="checkbox"/> Use-as-is <input type="checkbox"/> Work Order Update <input type="checkbox"/>	<b>AGAINST DEPARTMENT/PROCESS</b>  <table style="width: 100%;"> <tr> <td>Skid-tube <input type="checkbox"/></td> <td>Crosstube <input type="checkbox"/></td> <td>Water Jet <input type="checkbox"/></td> <td>Engineering <input type="checkbox"/></td> </tr> <tr> <td>Machining <input type="checkbox"/></td> <td>Small Fab <input type="checkbox"/></td> <td>Prod. Eng. Coord. <input type="checkbox"/></td> <td>Quality <input type="checkbox"/></td> </tr> <tr> <td>Thermoforming <input type="checkbox"/></td> <td>Finishing <input type="checkbox"/></td> <td>Rec/Store/Packaging <input type="checkbox"/></td> <td>Other <input type="checkbox"/></td> </tr> <tr> <td>Large Fab <input type="checkbox"/></td> <td>Composite <input type="checkbox"/></td> <td>Supplier <input type="checkbox"/></td> <td></td> </tr> </table>	Skid-tube <input type="checkbox"/>	Crosstube <input type="checkbox"/>	Water Jet <input type="checkbox"/>	Engineering <input type="checkbox"/>	Machining <input type="checkbox"/>	Small Fab <input type="checkbox"/>	Prod. Eng. Coord. <input type="checkbox"/>	Quality <input type="checkbox"/>	Thermoforming <input type="checkbox"/>	Finishing <input type="checkbox"/>	Rec/Store/Packaging <input type="checkbox"/>	Other <input type="checkbox"/>	Large Fab <input type="checkbox"/>	Composite <input type="checkbox"/>	Supplier <input type="checkbox"/>	
Skid-tube <input type="checkbox"/>	Crosstube <input type="checkbox"/>	Water Jet <input type="checkbox"/>	Engineering <input type="checkbox"/>															
Machining <input type="checkbox"/>	Small Fab <input type="checkbox"/>	Prod. Eng. Coord. <input type="checkbox"/>	Quality <input type="checkbox"/>															
Thermoforming <input type="checkbox"/>	Finishing <input type="checkbox"/>	Rec/Store/Packaging <input type="checkbox"/>	Other <input type="checkbox"/>															
Large Fab <input type="checkbox"/>	Composite <input type="checkbox"/>	Supplier <input type="checkbox"/>																

Root Cause	Date	Step	Qty	Description of work order update or Non-conformance	Initial Chief Eng	Action Description	Sign & Date	Verification	QC Inspector
Doc/Data <input type="checkbox"/>									
Equip/Tooling <input type="checkbox"/>									
Operator <input type="checkbox"/>									
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Setup <input type="checkbox"/>									
Other <input type="checkbox"/>									
Process <input type="checkbox"/>									
Supplier <input type="checkbox"/>									
Training <input type="checkbox"/>									
Unapproved <input type="checkbox"/>									

### FAULT CATEGORY

<b>Landing Gear</b> <input type="checkbox"/> Bending <input type="checkbox"/> Centre Not Concentric to O/S <input type="checkbox"/> Cracks <input type="checkbox"/> Crushed/Crimped. <input type="checkbox"/> Cuffs <input type="checkbox"/> Heat Treat <input type="checkbox"/> Inspection Strip in Tube <input type="checkbox"/> Ripples in Bend <input type="checkbox"/> Torque Waves in Extrusion <input type="checkbox"/> Turning Sequence <input type="checkbox"/> Wave/Twist in Tube	<b>General</b> <input type="checkbox"/> Bend <input type="checkbox"/> BOM/Route <input type="checkbox"/> Broken/Damaged <input type="checkbox"/> Burrs <input type="checkbox"/> Contamination <input type="checkbox"/> Countersink <input type="checkbox"/> Cut Too Short <input type="checkbox"/> Drill Holes <input type="checkbox"/> Drawing <input type="checkbox"/> Finish <input type="checkbox"/> Folio	<input type="checkbox"/> Grain <input type="checkbox"/> Hardware <input type="checkbox"/> Inspection Incomplete <input type="checkbox"/> Instructions Incomplete/Unclear <input type="checkbox"/> Maintenance <input type="checkbox"/> Mislabelled <input type="checkbox"/> Misread <input type="checkbox"/> Offset <input type="checkbox"/> Out of Calibration <input type="checkbox"/> Out of Sequence <input type="checkbox"/> Outside Dimensions
		<input type="checkbox"/> Ovalized <input type="checkbox"/> Over/Under tolerance <input type="checkbox"/> Part Incorrect <input type="checkbox"/> Part Lost/Missing <input type="checkbox"/> Part Moved <input type="checkbox"/> Positioned Wrong <input type="checkbox"/> Power Loss/Surge
		<input type="checkbox"/> Pressure/Forced <input type="checkbox"/> Temperature/Cure <input type="checkbox"/> Weld <input type="checkbox"/> Wrong Stock Pulled <input type="checkbox"/> Other



Dart Aerospace Ltd.  
1270 Aberdeen Street  
Hawkesbury, ON K6A 1K7  
Tel: 613 632 9577  
Fax: 613 632 1053

## PURCHASE ORDER

Purchase Order ID **PO18965**

Purchase Order Date 1/28/2013

PO Print Date 1/29/2013

Page Number 1 of 1

Order From :

VC-GFI001

GFI  
180 AVENUE LABROSSE  
POINTE CLAIRE, QC H9R 1A1  
CA

Contact Name

Vendor Phone 514 630 4877

Vendor Fax 514 630 4849

Vendor Account Nbr

Buyer

Brigitte Golden

Requisition Nbr

Tax Resale Nbr

10127-2607

Terms

Net 30

Currency

CAD

FOB

Destination-Collect

Ship To :

DART AEROSPACE LTD 1270 ABERDEEN  
HAWKESBURY, ON K6A 1K7  
CANADA

Line Nbr	Reference Revision ID Vendor Part Number	Description/ Mfg ID	Req Date/ Taxable	Req Qty/ Unit of Measure	Ship Method	Unit Price	Extended Price
1	D3628-5P	CUPPED WASHER	1/28/2013 Yes	1,200.00 Each	FedEx PI collect	\$2.1000	\$2,520.00

Special Inst: As per DWG: D3628 Rev: C  
B96385

PO Total:

\$2,520.00

Change Nbr: 2

Change Date: 1/29/2013

No substitution or deviation without  
consent.  
Certificate of Conformity or Material  
Certification required - YES NO



180 AVENUE LABROSSE  
POINTE-CLAIRE, QC, CANADA H9R 1A1  
TÉL.:(514) 630-4877 - FAX:(514) 630-4849

GFI est une division de Thomas & Betts Fabrication Inc. / GFI is a division of Thomas & Betts Manufacturing Inc.



# BON DE LIVRAISON / SHIPPING MEMO

DATE DE LIVRAISON / SHIPPING DATE			N° DE BON DE LIVRAISON / SHIPPING MEMO NO	PAGE
JR - DY	MO - MO	AN - YR		
18	02	13	0507534	1/1



VENDU À / SOLD TO

EXPÉDIÉ À / SHIP TO

DART AEROSPACE LTD  
1270 ABERDEEN ST.  
HAWKESBURY, ON  
K6A 1K7

DART AEROSPACE LTD  
1270 ABERDEEN ST.  
HAWKESBURY, ON  
K6A 1K7

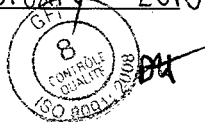
CODE DE CLIENT / CUSTOMER CODE	N° DE CONTRAT / JOB NO.	VOTRE N° DE COMMANDE / YOUR PURCHASE ORDER NO	EXPÉDIÉ PAR / SHIP VIA
DART	GFI-0299	PO18965	
QUANTITÉ / QUANTITY	N° DE PIÈCE / PART NO	DESCRIPTION	

1200 D3628-5P

CUPPED WASHER

MFG. JOB# J0963066-001 QTY 1200 pcs

DUE DATE: 22 February 2013



EXPÉDITEUR / SHIPPER

N° DE BON DE LIVRAISON / SHIPPING MEMO NO



REÇU PAR / RECEIVED BY

DATE

TOUTES LES RÉCLAMATIONS DOIVENT ÊTRE FAITES EN DEDANS DE 5 JOURS DE LA RÉCEPTION.  
ALL CLAIMS MUST BE MADE WITHIN 5 DAYS OF RECEIPT OF GOODS.

# CERTIFICATE OF COMPLIANCE CERTIFICAT DE CONFORMITE



Membre de / A Member of **Thomas & Betts**

180 LABROSSE AVENUE  
POINTE CLAIRE, QC  
H9R 1A1

**DART AEROSPACE LTD**  
1270 ABERDEEN ST.  
HAWKESBURY, ON K6A 1K7

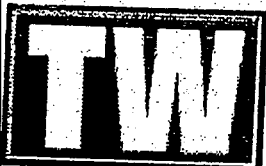
CERTIFICATE NO. <b>5</b>		OUR JOB NO. <b>J0263066</b>		SHIPPING MEMO <b>0507534</b>	
ITEM	QUANTITY	PURCHASE ORDER	PART NUMBER	REV	NAME
<b>---</b>	<b>1200 PCS</b>	<b>PO18965</b>	<b>D3628-5P</b>	<b>C</b>	<b>CUPPED WASHER</b>
MATERIAL		SUPPLIED BY		MAT. REL. NO.	
<b>AMS 5513 304 ANN</b>		<b>TW METALS / NORTH AMERICAN STAINLESS</b>		<b>H/N 980065</b>	

	PROCESS	PROCESSOR	RELEASE NOTE #
1	<b>FIRST ARTICLE INSPECTION REPORT ON FILE</b>	<b>GFI</b>	<b>N/A</b>
2	<b>REF GFI MANUFACTURING JOB NUMBER J0263066-001 (1200 PCS)</b>	<b>GFI</b>	<b>N/A</b>
3			
4			
5			
6			
7			
8			
9			

WE HEREBY CERTIFY ALL THE PARTS COVERED BY THIS CERTIFICATE HAVE BEEN MANUFACTURED FROM MATERIAL SUPPLIED ON RELEASE NOTE SHOWN ABOVE AND THAT ALL PARTS HAVE BEEN INDIVIDUALLY INSPECTED AND CONFORM TO THE DRAWINGS AND PURCHASE ORDER REFERENCED ABOVE.

DATE **18 FEBRUARY 2013**

G.F.I. Q.C. REP.



O'Neal High-Performance  
Metals Group

### CERTIFICATIONS

#### FRAUD AND FALSIFICATION STATEMENT

The recording of false, fictitious or fraudulent statements or entries on this document may be punished as a felony under statutes including federal law. Title 18 chapter 47.

#### CERTIFICATE OF COMPLIANCE

This certificate of compliance certifies that the material supplied on the purchase order number below complies in all respects with the material description and procurement specifications.

#### MERCURY FREE STATEMENT

TW Metals certifies that the supplies furnished under this contract contain no metallic mercury or mercury compounds, and have not come in contact with mercury or alpha bearing instruments while in the possession of TW Metals Inc.

Customer Name:

GFI, Inc

Purchase Order No.:

0081864

Item number: 0001

Shipper/Invoice No.:

03306283

Material:

304 s/s Sheet

Manufacturing Mill:

Allegheny Ludlum

Specification: Ams 5513

Heat / Lot No.

980065

Size:

.050

Quantity:

4pc

Signature:

Janice Clark

Date:

2/17/13

NOTICE OF SHIPMENT/  
PACKING LIST



CERTIFICATE OF TEST

AL 6166-4 1211

CUST. ORD. NO. & DATE: M 49282420  
 CUST. CODE: 974093  
 08/23/12  
 VANDERGRIFF, PA.  
 556118  
 GOVT CONTRACT  
 13020102060000  
 30-082-537  
 10/15/12  
 1121 VANDERGRIFF  
 SHIP TO  
 SPECIALTY METALS PROCESSING  
 837 SEASONS ROAD  
 STOW  
 OH 44224  
 DATE SHIPPED: 10/15/12  
 INVOICE: 659294  
 MILL ORDER NUMBER: 30-082-537  
 SHIPPING LOCATION: PA

GRADE AND SPECIFICATIONS  
 "ATI 304" STAINLESS STEEL SHEET C R COILS ANNEALED 2B FIN 3 EDGE (AMS 5513J) (ASTM-A-666-10) (ASME-SA-240 ED 2010) (ASTM-A-240-12) (CP49-7.4.2-005 REV 7) (6/14/12 EXCEPT TO CP49-7.4.2-005)  
 CARRIER - STIVASON & SONS TRKG., INC  
 ITEM PCS DIMENSIONS W/G/L  
 001 1 36./050/2346.  
 C CUST IDENTITY 47252  
 1 SKID  
 HEAT # COIL # TEST # GROSS TARE NET THEO TAG #/ CD SKID #  
 980065 09112N183 8797948 14090 50 14040 893289  
 14090 50 14040

DIST: MAIL AND FAX ACK, S/N AND INVOICE TO "ATTN: CARA TURNER" @ 484-359-9236. FAX IN ADVANCE OF SHIPMENT ALL CT'S TO 484-359-9236. ATTN: CARA TURNER

TYPE HEAT/TEST  
 HEAT 980065  
 TEST LOCATION

--C--	--MN--	--P--	--S--	--SI--	--CR--	--NI--	--MO--	--CU--	--N--
.05	1.19	.034	.0004	.36	18.20	8.03	.45	.52	.08
MI	MI	MI	MI	MI	MI	MI	MI	MI	MI

ITEM TEST NO  
 001 8797948

YIELD TENSILE & ELONG  
 PSI \* PSI IN 2"

TEST LOCATION

T 52000. 96500. 53.  
 TC TC TC  
 \* Y.S. BY 0.2% OFFSET METHOD

ITEM TEST NO  
 001 8797948

MELT  
 SOURCE  
 1.

HARDNESS BEND A 262 PR E SIZE  
 86.HRBW T PASS PASS NR  
 86.HRBW TC TC

HARDENABILITY  
 NR

TW METALS  
 M49282420  
 OCT 17 2012  
 ACCEPTED BY  
 TEST

NR = DATA NOT REQUIRED  
 GRADE VERIFICATION WAS CARRIED OUT SPECTROSCOPICALLY  
 PAGE 01 - CONTINUED ON PAGE 02

CONSIGNEE - Please Note - This consignment was turned over to carrier in first class condition, being correctly loaded, at which time our responsibility for loss or damage in shipment ceased. For your protection please examine shipment as it arrives. If any shortage or damage is discovered, have a full description made by transportation agent on waybill before signing.

Material Safety Data Sheets for this product have been supplied to your Purchasing Department. For an additional copy phone 724-224-8989. CAUTION: Processing that makes fumes, dust, or solutions may cause lung disease. See Material Safety Data Sheets for further information.

WARNING  
 Les fiches d'information-sécurité de ce produit ont été fournies à votre département chargé des achats. Pour obtenir des exemplaires supplémentaires veuillez téléphoner au numéro 724-224-8989. Attention: Les procédés entraînant la production de vapeurs, poussières, ou solutions peuvent être cause de maladies pulmonaires. Pour plus de renseignements se référer aux fiches d'information-sécurité.

The above is a true copy of data on file. The material and test results conform to the sales contract and specification(s) as set forth in Allegheny Ludlum's Order Acknowledgement.

Stephen Wolf - Director, Corporate Quality Assurance

NOTICE OF SHIPMENT/  
PACKING LIST



CERTIFICATE OF TEST

AL 6166-4 1211

FROM:

CUST. ORD. NO. & DATE M 49282420		CUST. CODE 08/23/12 974093		ACCEPTING MILL VANDERGRIFT, PA.		SHIPPER NO. 556118		PRODUCT CODE 13020102060000		MILL ORDER NUMBER 30-082-537		DATE SHIPPED 10/15/12	
FORMS DISTRIBUTION SOLD TO 4 SHIP TO 1 SPEC TO TW METALS INC PO BOX 644 EXTON PA 19341		REPEAT ORDER 95434-1		DO RATE 38		GOVT CONTRACT		MATERIAL 1121 VANDERGRIFT		SHIPPING LOCATION PA		INVOICE 659294	
		PRIME SEC. DSO DSO 56		SHIP TO SPECIALTY METALS PROCESSING 837 SEASONS ROAD STOW OH 44224									

GRADE AND SPECIFICATIONS

"ATI 304" STAINLESS STEEL SHEET C R COILS ANNEALED 2B FIN 3 EDGE (AMS 5513J) (ASTM-A-666-10) (ASME-SA-240 ED 2010) (ASTM-A-240-12) (CP49-7.4.2-005 REV 7) (6/14/12 EXCEPT TO CP49-7.4.2-005)

DIN EN 10204:2005 - 3.1 CERTIFICATE DOES NOT INDICATE PED APPROVAL FOR THIS MATERIAL.

ATI ALLEGHENY LUDLUM DOES NOT USE MERCURY IN THE TESTING OR PRODUCTION OF ITS PRODUCTS.

MATERIAL IS OF USA MELT AND MANUFACTURE.

NO WELDS/WELD REPAIRS PERFORMED.

THIS DIN EN 10204:2005 - 3.1 CERTIFICATE OF TEST SHALL NOT BE REPRODUCED EXCEPT IN FULL. FEDERAL LAW PROHIBITS THE RECORDING OF FALSE, FICTITIOUS, OR FRAUDULENT STATEMENTS OR ENTRIES ON THE CERTIFICATE AND MAY BE PUNISHABLE AS A FELONY UNDER FEDERAL LAW. ATI AL HOLDS SEVERAL QUALITY CERTIFICATIONS THAT INCLUDE ISO-9001, AS9100, NADCAP, AND ISO/IEC 17025. MATERIAL WAS MANUFACTURED IN ACCORDANCE WITH THE ATI AL QUALITY MANUAL REVISION 20 DATED 02/24/2012.

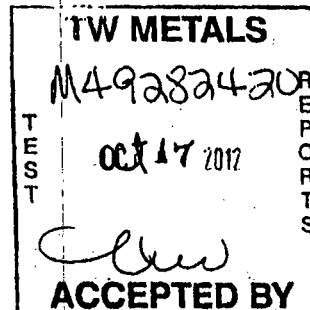
ATI ALLEGHENY LUDLUM PERFORMS CHEMICAL ANALYSIS BY THE FOLLOWING TECHNIQUES:

C, S BY COMBUSTION/INFRARED  
N, O, H BY INERT FUSION/THERMAL CONDUCTIVITY  
MN, P, SI, CR, NI, MO, CU, CB, CO, V BY WDXRF  
B BY OES  
AL AND TI (>=0.10%) BY WDXRF, OTHERWISE BY OES  
PB, BI, AG BY GFAA

THE NUMERIC CODES SHOWN UNDER MELT SOURCE CAN BE INTERPRETED AS FOLLOWS:

1. - MATERIAL MELTED, ROLLED AND TESTED IN THE UNITED STATES.
2. - FOREIGN MELT; ROLLED AND TESTED IN THE UNITED STATES.

PAGE 02 - CONTINUED ON PAGE 03



10/15/12 09:28:34

CONSIGNEE. Please Note-This consignment was turned over to carrier in first class condition, being correctly loaded, at which time our responsibility for loss or damage in shipment ceased. For your protection please examine shipment as it arrives. If any shortage or damage is discovered, have a full description made by transportation agent on receipt before signing.

Material Safety Data Sheets for this product have been supplied to your Purchasing Department. For an additional copy phone 724-228-6990. CAUTION: Processing that makes fumes, dust, or solutions may cause lung disease. See Material Safety Data Sheet for further information.

WARNING  
Les fiches d'information-sécurité de ce produit ont été fournies à votre département chargé des achats. Pour obtenir des exemplaires supplémentaires veuillez téléphoner au numéro suivant 724-228-6990. Attention: Les traitements entraînant la production de vapeurs, poussières, ou solutions peuvent être cause de maladies pulmonaires. Pour plus de renseignements se référer aux fiches d'information-sécurité.

The above is a true copy of data on file. The material and test results conform to the sales contract and specification(s) as set forth in Allegheny Ludlum's Order Acknowledgement.

Stephen Wolf - Director, Corporate Quality Assurance



NOTICE OF SHIPMENT/  
PACKING LIST



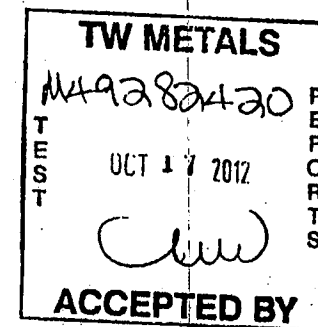
CERTIFICATE OF TEST

AL 6168-4 1211

CUST. ORD. NO. & DATE M 49282420		CUST. CODE 974093		SHIPPER NO 556118		PRODUCT CODE 13020102060000		MILL ORDER NUMBER 30-082-537		DATE SHIPPED 10/15/12	
FORMS DISTRIBUTION SOLD TO → 4 SHIP TO → 1		08/23/12		VANDERGRIFF, PA.		GOV'T CONTRACT		SHIPPING LOCATION 1121 VANDERGRIFF PA		INVOICE 659294	
SOLD TO TW METALS INC PO BOX 644 EXTON PA 19341		REPEAT ORDER 95434-1		DO RATE 38		PRI ORITY		SHIP TO SPECIALTY METALS PROCESSING 837 SEASONS ROAD STOW OH 44224			
		PRIME DSO		SEC. DSO							

GRADE AND SPECIFICATIONS  
"ATI 304" STAINLESS STEEL SHEET C R COILS ANNEALED 2B FIN 3 EDGE (AMS 5513J) (ASTM-A-666-10) (ASME-SA-240 ED 2010) (ASTM-A-240-12) (CP49-7.4.2-005 REV 7) (6/14/12 EXCEPT TO CP49-7.4.2-005)  
CARRIER - STIVASON & SONS TRKG., INC  
TESTING WAS PERFORMED AT THE FOLLOWING LOCATIONS:  
MI = ATI-ALLEGHENY LUDLUM; 950 TENTH STREET; MIDLAND, PA 15059  
TC = ATI-ALLEGHENY LUDLUM; 1300 PACIFIC AVENUE; NATRONA HEIGHTS, PA 15065

FOR ACCESS TO ONLINE CERTIFICATES OF TEST  
REGISTER AT WWW.ALCEXTRA.COM



PAGE 03 - FINAL PAGE.

10/15/12 09:28:34

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WARNING  
Les fiches d'information-sécurité de ce produit ont été fournies à votre département chargé des achats. Pour obtenir des exemplaires supplémentaires, veuillez téléphoner au service-achats 724-228-6900. Attention: les traitements entraînent la production de vapeurs, poussières, ou solutions peuvent être cause de maladies pulmonaires. Pour plus de renseignements se référer aux fiches d'information-sécurité.

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Director, Corporate Quality Assurance